REMARKS

The Office Action of April 10, 2007 (hereinafter "Office Action") has been carefully reviewed. Claims 1-35 are pending in this patent application. By this amendment, claims 1, 3-4, 6-7, 9, 11-14, 16-17, 20, 22-27, 30 and 32-33 have been amended and claims 5, 10, 19, 21, 28-29 and 34-35 had been cancelled. Please note that Claims 28 and 29 have been previously withdrawn from further consideration.

The present amendment is being filed under a Certificate of Mailing as indicated.

Double Patenting

'387 in View of Wagner

Claims 1-27 and 30-35 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 38, 39, 46 and 51 of copending US Patent Application No. 10/100,387 (hereinafter "'387") in view of US Patent No. 6,030,389 to Wagner et al. (hereinafter "Wagner"). Claims 5, 10, 19, 21, and 34-35 have been cancelled. The rejection of claims 5, 10, 19, 21, and 34-35 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over '387 in view of Wagner is now believed to be moot.

Discussion Regarding Patentability of Amended Claim 1 and Claims 2-6 Dependent Thereon

Currently amended Claim 1

Claim 1, as currently amended, recites the following limitations:

> a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position, said pin being positionable in an orientation extending divergently from said plate

The fasteners in '387 include threads for securing the plate to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither '387 nor Wagner, either individually or in combination, teach or suggest the use of "a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position, said pin being positionable in an orientation extending divergently from said plate" as now claimed in claim 1.

While '387 utilizes a bone plate 14 with polyaxial attachment components 34, it does not use pins. The plate in claim 1 as currently amended uses a pin, not the screws 34 as taught in '389. If the polyaxial attachment components 34 of '387 are replaced with the bone screws 20 of Wagner, the resulting bone plate does not use a pin.

Further, if the bushings 24 and the attachment components 34 of '387 are replaced with the rings 18 and the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Utilizing the attachment components 34 of '387 in the plate of Wagner will not arrive at the device of claim 1 having a pin.

As a result, '387 and Wagner cannot be combined to establish a prima facie case of obviousness under the judicially created doctrine of obviousness-type double patenting with respect to amended claim 1. Claims 2-4 and 6 depend on claim 1 including all the limitations of claim 1 and therefore are not obvious under the judicially created doctrine of obviousness-type double patenting as being unpatentable over '387 in view of Wagner.

Discussion Regarding Patentability of Amended Claim 7 and Claims 8-9 and 11 Dependent Thereon

Currently Amended Claim 7

Claim 7, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with the head hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the head hole of said plate being configured to permit polyaxial rotation of said bushing within the head hole; and
>
> a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position.

The fasteners in '387 include threads for securing the plate to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither '387 nor Wagner, either individually or in combination, teach or suggest the use of "a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 7.

While '387 utilizes a bone plate 14 with polyaxial attachment components 34, it does not use pins. The plate in claim 7 as currently amended uses a pin, not the screws 34 as taught in '389. If the polyaxial attachment components 34 of '387 are replaced with the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Further, if the bushings 24 and the attachment components 34 of '387 are replaced with the rings 18 and the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Utilizing the attachment components 34 of '387 in the plate of Wagner will not arrive at the device of claim 7 having a pin.

As a result, '387 and Wagner cannot be combined to establish a prima facie case of obviousness under the judicially created doctrine of obviousness-type double patenting with respect to amended claim 7. Claims 8-9 and 11 depend on claim 7 including all the limitations of claim 7 and therefore are not obvious under the judicially created doctrine of obviousness-type double patenting as being unpatentable over '387 in view of Wagner.

Discussion Regarding Patentability of Amended Claim 12 and Claims 13-16 Dependent Thereon

Currently Amended Claim 12

Claim 12, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with the first body hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the first body hole of said plate being configured to permit polyaxial rotation of said bushing within the first body hole; and
>
> a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position.

The fasteners in '387 include threads for securing the plate to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither '387 nor Wagner, either individually or in combination, teach or suggest the use of "a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 12.

While '387 utilizes a bone plate 14 with polyaxial attachment components 34, it does not use pins. The plate in claim 12 as currently amended uses a pin, not the screws 34 as taught in '389. If the polyaxial attachment components 34 of '387 are replaced with the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Further, if the bushings 24 and the attachment components 34 of '387 are replaced with the rings 18 and the bone screws 20 of Wagner, the

resulting bone plate does not use a pin. Utilizing the attachment components 34 of '387 in the plate of Wagner will not arrive at the device of claim 12 having a pin.

As a result, '387 and Wagner cannot be combined to establish a prima facie case of obviousness under the judicially created doctrine of obviousness-type double patenting with respect to amended claim 12. Claims 13-16 depend on claim 12 including all the limitations of claim 12 and therefore are not obvious under the judicially created doctrine of obviousness-type double patenting as being unpatentable over '387 in view of Wagner.

Discussion Regarding Patentability of Amended Claim 17 and Claims 18 and 20 Dependent Thereon

Currently Amended Claim 17

Claim 17, as currently amended, recites the following limitations:

> a first bushing including a generally spherical exterior surface adapted for cooperation with the first hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said first bushing and the first hole of said plate being configured to permit polyaxial rotation of said first bushing within the first hole;
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the first internal wall of said plate to form a friction lock between said first bushing and said plate in a selected polyaxial position;
>
> a second bushing including a generally spherical exterior surface adapted for cooperation with the second hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said second bushing and the second hole of said plate being configured to permit polyaxial rotation of said second bushing within the first hole; and
>
> a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the second internal wall of said plate to form a friction lock between said second bushing and said plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin.

The fasteners in '387 include threads for securing the plate to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither '387 nor Wagner, either individually or in combination, teach or suggest the use of "a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank" as now claimed in claim 17.

While '387 utilizes a bone plate 14 with polyaxial attachment components 34, it does not use pins. The plate in claim 17 as currently amended uses a pin, not the screws 34 as taught in '389. If the polyaxial attachment components 34 of '387 are replaced with the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Further, if the bushings 24 and the attachment components 34 of '387 are replaced with the rings 18 and the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Utilizing the attachment components 34 of '387 in the plate of Wagner will not arrive at the device of claim 17 having a pin.

As a result, '387 and Wagner cannot be combined to establish a prima facie case of obviousness under the judicially created doctrine of obviousness-type double patenting with respect to amended claim 17. Claims 18 and 20 depend on claim 17 including all the limitations of claim 17 and therefore are not obvious under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over '387 in view of Wagner.

Discussion Regarding Patentability of Amended Claim 22 and Claims 23-27 Dependent Thereon

Currently Amended Claim 22

Claim 22, as currently amended, recites the following limitations:

> a first plate for cooperation with the first long bone, the first plate having an internal wall defining a first plate hole therethrough;
>
> a first bushing including a generally spherical exterior surface adapted for cooperation with the first plate hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said first bushing and the first plate hole of said first plate being configured to permit polyaxial rotation of said first bushing within the first plate hole;
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the internal wall of said first plate to form a friction lock between said first bushing and said first plate in a selected polyaxial position;
>
> a second plate for cooperation with the second long bone, the second plate having an internal wall defining a second plate hole ~~a~~ therethrough;
>
> a second bushing including a generally spherical exterior surface adapted for cooperation with the second plate hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said second bushing and the second plate hole of said second plate being configured to permit polyaxial rotation of said second bushing within the second plate hole; and
>
> a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the internal wall of said second plate to form a friction lock between said second bushing and said second plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin.

The fasteners in '387 include threads for securing the plate to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither '387 nor Wagner, either individually or in combination, teach or suggest the use of "a first plate for cooperation with the first long bone; a first pin

including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the internal wall of said first plate to form a friction lock between said first bushing and said first plate in a selected polyaxial position; a second plate for cooperation with the second long bone and a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the internal wall of said second plate to form a friction lock between said second bushing and said second plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin" as now claimed in claim 22.

While '387 utilizes a bone plate 14 with polyaxial attachment components 34, it does not use pins. The plate in claim 22 as currently amended uses a pin, not the screws 34 as taught in '389. If the polyaxial attachment components 34 of '387 are replaced with the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Further, if the bushings 24 and the attachment components 34 of '387 are replaced with the rings 18 and the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Utilizing the attachment components 34 of '387 in the plate of Wagner will not arrive at the device of claim 22 having a pin.

As a result, '387 and Wagner cannot be combined to establish a prima facie case of obviousness under the judicially created doctrine of obviousness-type double patenting with respect to amended claim 22. Claims

23-27 depend on claim 22 including all the limitations of claim 22 and therefore are not obvious under the judicially created doctrine of obviousness-type double patenting as being unpatentable over '387 in view of Wagner.

Discussion Regarding Patentability of Amended Claim 30 and Claims 31-33 Dependent Thereon

Currently Amended Claim 30

Claim 30, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with one of the body hole and the head hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the one of the body hole and the head hole of said plate being configured to permit polyaxial rotation of said bushing within the one of the body hole and the head hole; and
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the internal wall of one of the body portion and the head portion, said plate configured to form a friction lock between said bushing and said plate in a selected polyaxial position

The fasteners in '387 include threads for securing the plate to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither '387 nor Wagner, either individually or in combination, teach or suggest the use of "a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the internal wall of one of the body portion and the head portion, said plate configured to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 30.

While '387 utilizes a bone plate 14 with polyaxial attachment components 34, it does not use pins. The plate in claim 30 as currently amended uses a pin, not the screws 34 as taught in '389. If the polyaxial attachment components 34 of '387 are replaced with the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Further, if the bushings 24 and the attachment components 34 of '387 are replaced with the rings 18 and the bone screws 20 of Wagner, the resulting bone plate does not use a pin. Utilizing the attachment components 34 of '387 in the plate of Wagner will not arrive at the device of claim 30 having a pin.

As a result, '387 and Wagner cannot be combined to establish a prima facie case of obviousness under the judicially created doctrine of obviousness-type double patenting with respect to amended claim 30. Claims 31-33 depend on claim 30 including all the limitations of claim 30 and therefore are not obvious under the judicially created doctrine of obviousness-type double patenting as being unpatentable over '387 in view of Wagner.

Claim Rejections – 35 USC § 102

First 35 U.S.C. § 102 Rejection – Claims 1-17 and 30-35 To Bono

Claims 1-17 and 30-35 were rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,954,722 to Bono (hereinafter "Bono"). Claims 5, 10, and 34-35 have been cancelled. The rejection of claims 5, 10, and 34-35 under 35 U.S.C. § 102(b) as being anticipated by Bono is now believed to be moot.

Discussion Regarding Patentability of Amended Claim 1 and Claims 2-4 and 6 Dependent Thereon

Currently Amended Claim 1

Claim 1, as currently amended, recites the following limitations:

> a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position, said pin being positionable in an orientation extending divergently from said plate

The bone screws 18 in Bono include threads for securing the plate 12 to bone.

Bono does not disclose the use of "a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position, said pin being positionable in an orientation extending divergently from said plate" as now claimed in claim 1.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the locking plate apparatus 10 in Bono does not disclose each and every element of Applicants' claim 1 as amended, Bono does not anticipate amended claim 1. Claims 2-4 and 6 depend on claim 1 including all the limitations of claim 1 and therefore are not anticipated by Bono under 35 U.S.C. § 102.

Discussion Regarding Patentability of Amended Claim 7 and Claims 8-9 and 11 Dependent Thereon

Currently Amended Claim 7

Claim 7, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with the head hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the head hole of said plate being configured to permit polyaxial rotation of said bushing within the head hole; and
>
> a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position.

The bone screws 18 in Bono include threads for securing the plate 12 to bone.

Bono does not disclose the use of "a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction

lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 7.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the locking plate apparatus 10 in Bono does not disclose each and every element of Applicant's claim 7 as amended, Bono does not anticipate claim 7. Therefore, the rejection of claim 7 under 35 U.S.C. 102(b) as being anticipated by Bono is thereby believed to be overcome. Claims 8-9 and 11 depend on claim 7 including all the limitations of claim 7 and therefore are not anticipated by Bono under 35 U.S.C. § 102.

Discussion Regarding Patentability of Amended Claim 12 and Claims 13-16 Dependent Thereon

Currently Amended Claim 12

Claim 12, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with the first body hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the first body hole of said plate being configured to permit polyaxial rotation of said bushing within the first body hole; and
>
> a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position.

The bone screws 18 in Bono include threads for securing the plate 12 to bone.

Bono does not disclose the use of "a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank

and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 12.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the locking plate apparatus 10 in Bono does not disclose each and every element of Applicant's claim 12 as amended, Bono does not anticipate claim 12. Therefore, the rejection of claim 12 under 35 U.S.C. 102(b) as being anticipated by Bono is thereby believed to be overcome. Claims 13-16 depend on claim 12 including all the limitations of claim 12 and therefore are not anticipated by Bono under 35 U.S.C. § 102.

Discussion Regarding Patentability of Amended Claim 17

Currently Amended Claim 17

Claim 17, as currently amended, recites the following limitations:

> a first bushing including a generally spherical exterior surface adapted for cooperation with the first hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said first bushing and the first hole of said plate being configured to permit polyaxial rotation of said first bushing within the first hole;
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the first internal wall of said plate to form a friction lock between said first bushing and said plate in a selected polyaxial position;
>
> a second bushing including a generally spherical exterior surface adapted for cooperation with the second hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said second bushing and the second hole of said plate being configured to permit polyaxial rotation of said second bushing within the first hole; and
>
> a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the second internal wall of said plate to form a friction lock between said second bushing and said plate in a selected polyaxial

position, said second pin being positionable in an orientation extending divergently from said first pin.

The bone screws 18 in Bono include threads for securing the plate 12 to bone.

Bono does not disclose the use of "a first plate for cooperation with the first long bone; a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the internal wall of said first plate to form a friction lock between said first bushing and said first plate in a selected polyaxial position; a second plate for cooperation with the second long bone and a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the internal wall of said second plate to form a friction lock between said second bushing and said second plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin" as now claimed in claim 17.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the locking plate apparatus 10 in Bono does not disclose each and every element of Applicants' claim 17 as amended, Bono does not anticipate claim 17. Therefore, the rejection of claim 17 under 35 U.S.C. 102(b) as being anticipated by Bono has been overcome.

Discussion Regarding Patentability of Amended Claim 30 and Claims 31-33 Dependent Thereon

Currently Amended Claim 30

Claim 30, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with one of the body hole and the head hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the one of the body hole and the head hole of said plate being configured to permit polyaxial rotation of said bushing within the one of the body hole and the head hole; and
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the internal wall of one of the body portion and the head portion, said plate configured to form a friction lock between said bushing and said plate in a selected polyaxial position
>
> .

The bone screws 18 in Bono include threads for securing the plate 12 to bone.

Bono does not disclose the use of "a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the internal wall of one of the body portion and the head portion, said plate configured to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 30.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the locking plate apparatus 10 in Bono does not disclose each and every element of Applicants' claim 30 as amended, Bono does not anticipate claim 30. Therefore, the rejection of claim 30 under 35 U.S.C. 102(b) as being anticipated by Bono has

been overcome. Claims 31-33 depend on claim 30 including all the limitations of claim 30 and therefore are not anticipated by Bono under 35 U.S.C. § 102.

Second 35 U.S.C. § 102 Rejection – Claims 7-9, 11-15, 17-19, 21, 22-24, 26-27 and 30-35 to Weaver

Claims 7-9, 11-15, 17-19, 21, 22-24, 26-27 and 30-35 were rejected under 35 U.S.C. § 102(b) as being anticipated by PCT Publication No. WO 01/19267 to Weaver et al. (hereinafter "Weaver"). Claims 19, 21, and 34-35 have been cancelled. The rejection of claims 19, 21, and 34-35 under 35 U.S.C. § 102(b) as being anticipated by Weaver is now believed to be moot.

Discussion Regarding Patentability of Amended Claim 7 and Claims 8-9 And 11 Dependent Thereon

Currently Amended Claim 7

Claim 7, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with the head hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the head hole of said plate being configured to permit polyaxial rotation of said bushing within the head hole; and
>
> a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone.

Weaver does not disclose the use of "a pin including a cylindrical shank having a non-threaded external periphery sized for clearance passage through the passageway and into the bone and a head extending from the shank and sized to urge said bushing against the internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 7.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the spinal plate 10 in Weaver does not disclose each and every element of Applicants' claim 7 as amended, Weaver does not anticipate claim 7. Therefore, the rejection of claim 7 under 35 U.S.C. 102(b) as being anticipated by Weaver is thereby believed to be overcome. Claims 8-9 and 11 depend on claim 7 including all the limitations of claim 7 and therefore are not anticipated by Weaver under 35 U.S.C. § 102.

Discussion Regarding Patentability of Amended Claim 12 and Claims 13-15 Dependent Thereon

Currently Amended Claim 12

Claim 12, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with the first body hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the first body hole of said plate being configured to permit polyaxial rotation of said bushing within the first body hole; and
>
> a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone.

Weaver does not disclose the use of "a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 12.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the spinal plate 10 in Weaver does not disclose each and every element of Applicants' claim 12 as amended, Weaver does not anticipate claim 12. Therefore, the rejection of claim 12 under 35 U.S.C. 102(b) as being anticipated by Weaver is thereby believed to be overcome. Claims 13-15 depend on claim 12 including all the limitations of claim 12 and therefore are not anticipated by Weaver under 35 U.S.C. § 102.

Discussion Regarding Patentability of Amended Claim 17 and Claim 18 Dependent Thereon

Currently Amended Claim 17

Claim 17, as currently amended, recites the following limitations:

> a first bushing including a generally spherical exterior surface adapted for cooperation with the first hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said first bushing and the first hole of said plate being configured to permit polyaxial rotation of said first bushing within the first hole;
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the first internal wall of said plate to form a friction lock between said first bushing and said plate in a selected polyaxial position;

> a second bushing including a generally spherical exterior surface adapted for cooperation with the second hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said second bushing and the second hole of said plate being configured to permit polyaxial rotation of said second bushing within the first hole; and
>
> a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the second internal wall of said plate to form a friction lock between said second bushing and said plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone.

Weaver does not disclose the use of "a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank" as now claimed in claim 17.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the spinal plate 10 in Weaver does not disclose each and every element of Applicants' claim 17 as amended, Weaver does not anticipate claim 17. Therefore, the rejection of claim 17 under 35 U.S.C. 102(b) as being anticipated by Weaver is thereby believed to be overcome. Claim 18 is dependent on claim 17 including all the limitations of claim 17 and therefore is not anticipated by Weaver under 35 U.S.C. § 102.

<u>Discussion Regarding Patentability of Amended Claim 22 and Claims 23-24 And 26-27 Dependent Thereon</u>

Currently Amended Claim 22

Claim 22, as currently amended, recites the following limitations:

> a first plate for cooperation with the first long bone, the first plate having an internal wall defining a first plate hole therethrough;
>
> a first bushing including a generally spherical exterior surface adapted for cooperation with the first plate hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said first bushing and the first plate hole of said first plate being configured to permit polyaxial rotation of said first bushing within the first plate hole;
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the internal wall of said first plate to form a friction lock between said first bushing and said first plate in a selected polyaxial position;
>
> a second plate for cooperation with the second long bone, the second plate having an internal wall defining a second plate hole a-therethrough;
>
> a second bushing including a generally spherical exterior surface adapted for cooperation with the second plate hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said second bushing and the second plate hole of said second plate being configured to permit polyaxial rotation of said second bushing within the second plate hole; and
>
> a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the internal wall of said second plate to form a friction lock between said second bushing and said second plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone.

Weaver does not disclose the use of "a first plate for cooperation with the first long bone; a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the internal wall of said first plate to form a friction lock between said first bushing and said first plate in a selected polyaxial position; a second plate for cooperation with the second long bone and a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against

the internal wall of said second plate to form a friction lock between said second bushing and said second plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin" as now claimed in claim 22.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the spinal plate 10 in Weaver does not disclose each and every element of Applicants' claim 22 as amended, Weaver does not anticipate claim 22. Therefore, the rejection of claim 22 as being anticipated by Weaver under 35 U.S.C. 102(b) has been overcome. Claims 23-24 and 26-27 depend on claim 22 including all the limitations of claim 22 and therefore are not anticipated by Weaver under 35 U.S.C. § 102.

Discussion Regarding Patentability of Amended Claim 30 and Claims 31-33 Dependent Thereon

Currently Amended Claim 30

Claim 30, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with one of the body hole and the head hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the one of the body hole and the head hole of said plate being configured to permit polyaxial rotation of said bushing within the one of the body hole and the head hole; and
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the internal wall of one of the body portion and the head portion, said plate configured to form a friction lock between said bushing and said plate in a selected polyaxial position.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone.

Weaver does not disclose the use of "a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the internal wall of one of the body portion and the head portion, said plate configured to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 30.

Anticipation under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since the spinal plate 10 in Weaver does not disclose each and every element of Applicants' claim 30 as amended, Weaver does not anticipate claim 30. Therefore, the rejection of claim 30 as being anticipated by Weaver under 35 U.S.C. 102(b) has been overcome. Claims 31-33 depend on claim 30 including all the limitations of claim 30 and therefore are not anticipated by Weaver under 35 U.S.C. § 102.

Claim Rejections – 35 USC § 103

Claims 10, 16, 20 and 25 were rejected under 35 USC §103(a) as being unpatentable over PCT Patent Publication WO 01/19267 to Weaver et al. in view of U.S. Patent 6,030,389 to Wagner et al. Claim 10 has been cancelled. The rejection of claim 10 under 35 U.S.C. § 102(b) as being anticipated by Bono is now believed to be moot. Arguments are provided below in response to this rejection. Reconsideration of the rejection to claims 16, 20 and 25, in light of the arguments provided below, is respectfully requested.

Discussion Regarding Patentability of Claim 16 Dependent on Amended Claim 12

Currently Amended Claim 12

Claim 12, as currently amended, recites the following limitations:

> a bushing including a generally spherical exterior surface adapted for cooperation with the first body hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said bushing and the first body hole of said plate being configured to permit polyaxial rotation of said bushing within the first body hole; and
>
> a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither Weaver nor Wagner, either individually or in combination, teach or suggest the use of "a pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said bushing against the first internal wall of said plate to form a friction lock between said bushing and said plate in a selected polyaxial position" as now claimed in claim 12.

While Weaver utilizes a bone plate 30 with rigid bone screws 20, it does not use pins. The plate in claim 12 as currently amended uses a pin, not the bone screws 20 as taught in Weaver. If the rigid bone screws 20 of Weaver are replaced in the bone plate 30 of Weaver with the rings 18 and the bone screws

20 of Wagner, the resulting bone plate, while providing multi-directionality of the screws, does not use a pin. Utilizing the rings 18 and the bone screws 20 of Wagner in the plate of Weaver will not arrive at the device of claim 12 having a pin.

Claim 16 depends on claim 12 including all the limitations of claim 12 and therefore is not obvious under 35 USC §103(a) as being unpatentable over Weaver in view of Wagner.

Discussion Regarding Patentability of Claim 20 Dependent on Amended Claim 17

Currently Amended Claim 17

Claim 17, as currently amended, recites the following limitations:

> a first bushing including a generally spherical exterior surface adapted for cooperation with the first hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said first bushing and the first hole of said plate being configured to permit polyaxial rotation of said first bushing within the first hole;
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the first internal wall of said plate to form a friction lock between said first bushing and said plate in a selected polyaxial position;
>
> a second bushing including a generally spherical exterior surface adapted for cooperation with the second hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said second bushing and the second hole of said plate being configured to permit polyaxial rotation of said second bushing within the first hole; and
>
> a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the second internal wall of said plate to form a friction lock between said second bushing and said plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither Weaver nor Wagner, either individually or in combination, teach or suggest the use of "a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank" as now claimed in claim 17.

While Weaver utilizes a bone plate 30 with rigid bone screws 20, it does not use pins. The plate in claim 17 as currently amended uses a pin, not the bone screws 20 as taught in Weaver. If the rigid bone screws 20 of Weaver are replaced in the bone plate 30 of Weaver with the rings 18 and the bone screws 20 of Wagner, the resulting bone plate, while providing multi-directionality of the screws, does not use a pin. Utilizing the rings 18 and the bone screws 20 of Wagner in the plate of Weaver will not arrive at the device of claim 17 having a pin.

Claim 20 depends on claim 17 including all the limitations of claim 17 and therefore is not obvious under 35 USC §103(a) as being unpatentable over Weaver in view of Wagner.

<u>Discussion Regarding Patentability of Claim 25 Dependent on Amended Claim 22</u>

Currently Amended Claim 22

Claim 22, as currently amended, recites the following limitations:

> a first plate for cooperation with the first long bone, the first plate having an internal wall defining a first plate hole therethrough;
>
> a first bushing including a generally spherical exterior surface adapted for cooperation with the first plate hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said first bushing and the first plate hole of said first plate being configured to permit polyaxial rotation of said first bushing within the first plate hole;
>
> a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the internal wall of said first plate to form a friction lock between said first bushing and said first plate in a selected polyaxial position;
>
> a second plate for cooperation with the second long bone, the second plate having an internal wall defining a second plate hole a-therethrough;
>
> a second bushing including a generally spherical exterior surface adapted for cooperation with the second plate hole and an opposed interior surface defining a passageway therethrough, the exterior surface of said second bushing and the second plate hole of said second plate being configured to permit polyaxial rotation of said second bushing within the second plate hole; and
>
> a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said second bushing against the internal wall of said second plate to form a friction lock between said second bushing and said second plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin.

The bone screws 20 in Weaver include threads for securing the plate 30 to bone. Similarly, the bone screws 20 in Wagner include threads for securing the plate 10 to bone.

Neither Weaver nor Wagner, either individually or in combination, teach or suggest the use of "a first plate for cooperation with the first long bone; a first pin including a cylindrical shank having a non-threaded external periphery and a head extending from the shank and sized to urge said first bushing against the internal wall of said first plate to form a friction lock between said first bushing and said first plate in a selected polyaxial position; a second plate for cooperation with the second long bone and a second pin including a cylindrical shank having a non-threaded external periphery and a head extending from the

shank and sized to urge said second bushing against the internal wall of said second plate to form a friction lock between said second bushing and said second plate in a selected polyaxial position, said second pin being positionable in an orientation extending divergently from said first pin" as now claimed in claim 22.

While Weaver utilizes a bone plate 30 with rigid bone screws 20, it does not use pins. The plate in claim 22 as currently amended uses a pin, not the bone screws 20 as taught in Weaver. If the rigid bone screws 20 of Weaver are replaced in the bone plate 30 of Weaver with the rings 18 and the bone screws 20 of Wagner, the resulting bone plate, while providing multi-directionality of the screws, does not use a pin. Utilizing the rings 18 and the bone screws 20 of Wagner in the plate of Weaver will not arrive at the device of claim 22 having a pin.

Claim 25 depends on claim 22 including all the limitations of claim 22 and therefore is not obvious under 35 USC §103(a) as being unpatentable over Weaver in view of Wagner .

Conclusion

For the above-described reasons it is respectfully submitted that the rejections to the claims have been overcome and that claims 1-27 and 30-35 are currently in condition for allowance. A prompt and favorable action on the merits is respectfully requested.

Respectfully submitted,

MAGINOT, MOORE and BECK LLP

/John S. Wagley/

John S. Wagley
Attorney for Applicants
Registration No. 36,043

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Maginot, Moore and Beck, LLP
Chase Tower
111 Monument Circle, Suite 3250
Indianapolis, Indiana 46204-5109
Phone: (317) 638-2922
Fax: (317) 638-2139